

**ABSTRACT OF THE DISCLOSURE**

An article coated with an electrolytically deposited bio-compatible composite layer useful as an internal prosthetic device is disclosed. The bio-compatible composite coating that is electrolytically deposited onto the article comprises hydroxyapatite and chitosan.

- 5 The introduction of chitosan into the crystal matrix of brushite/hydroxyapatite significantly improves the adhesive and chemical and mechanical stability properties of the coating.

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